



durable read change data page flush transaction log buffer persistent data store

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Results 1 - 100 of about 6,020 for durable read change data page flush transaction log buffer persistent data store. (0.54 seconds)

[Show options...](#)1. [Berkeley DB Data Store - Elephant User Manual](#)

:transaction This argument is for advanced use. It tells the Berkeley DB ... This internal function forces the **transaction log** to be **flushed** and all active **data** to be ... Finally, copy the resulting **data** to stable **storage**. **Read** the Berkeley DB ... :berkeley-db-cachesize - **Change** the size of the **buffer** cache for ... common-lisp.net/project/.../Berkeley-DB-Data-Store.html - [Cached](#) - [Similar](#)

2. [John Huang's Blog on SQL Server and .Net: 2010/05](#)

Any **data** modification to **persistent data** in the **data** files will be at least implicitly involved in a **transaction**. ... What if the **transaction** has been committed but the modified **data page** has not ... **Log** writer is the process to **flush** the **log buffer** to disk. ... Run Dynamic T-SQL from a Function with **Data Change**. ... sqlx.blogspot.com/2010_05_01_archive.html - [Cached](#)

3. [John Huang's Blog on SQL Server and .Net](#)

Any **data** modification to **persistent data** in the **data** files will be at least ... SQL Server will roll forward the **transaction** and make up the **data page**. ... **Log** writer is the process to **flush** the **log buffer** to disk. can also be **read** in this way as I mentioned in my first blog that encrypted **data** gets decrypted ... sqlx.blogspot.com/ - [Cached](#) - [Similar](#)

[Show more results from sqlx.blogspot.com](#)4. [Exchange Transactions and the Exchange Database Overview](#)

Durable Committed transactions are preserved in the database even if the system fails. ... **Log** writer As the buffers fill up, ESE moves the **data** from the buffers onto ... **Lazy** writer At this point, ESE must **flush** the dirty **pages** out of memory. in memory: **transaction log** buffers, **data** cache, and version **store**. ...

[technet.microsoft.com/en-us/.../aa996118\(EXCHG.65\).aspx](http://technet.microsoft.com/en-us/.../aa996118(EXCHG.65).aspx) - [Cached](#) - [Similar](#)

5. [SQL Server 2000 I/O Basics](#)

Jan 21, 2005 ... Earlier versions of SQL Server use 2-KB **data** and log **pages**. ... SQL Server 7.0 and SQL Server 2000 Logging and **Data Storage** All SQL Server **transaction log** and database file I/O is It is a clear sign that the **page** was changed, **flushed** to disk, and **read** back in; however, the **change** was not ...
technet.microsoft.com/en-us/library/cc966500.aspx - [Cached](#) - [Similar](#)
[More results from technet.microsoft.com »](#)

6. [Transaction log](#) - Wikipedia, the free encyclopedia

In the field of databases in computer science, a **transaction log** (also database log or ... Physically, a log is a file of updates done to the database, stored in stable **storage**. ... Update Log Record notes an update (**change**) to the database. ... If all dirty **pages** are **flushed** while creating the checkpoint (as in ...
en.wikipedia.org/wiki/Transaction_log - [Cached](#) - [Similar](#)

7. [Extensible Storage Engine](#) - Wikipedia, the free encyclopedia

An ESE database may contain up to 232 **pages**, or 16 terabytes of **data**, Synchronously **flushing** the **log** makes ESE transactions **durable**. ... Since a **transaction** may make changes based on **data read** that has already been updated in ... Modifications of the copy **buffer** do not automatically **change** the stored **data**. ...
en.wikipedia.org/wiki/Extensible_Storage_Engine - [Cached](#) - [Similar](#)



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8. [PDF] [Modular Data Storage](#) with Anvil

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by M Mammarella - [Related articles](#)

Many **data storage** layouts only add or **change read**-only. dTables, which are significantly easier Client code chooses start and end of each **transaction** ...
www.sigops.org/sosp/sosp09/slides/mammarella-slides-sosp09.pdf - [Similar](#)

9. [PDF] [Modular Data Storage](#) with Anvil

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a **persistent** commit **log** (like the Anvil **transaction** library's system journal), an in-memory **buffer** (like (although, for example, a truly **read-only data store** wouldn't need one). to explicitly **flush** the Anvil **transaction** (forcing synchronous ... actions

durable. This makes Anvil transactions lightweight, ...

www.sigops.org/sosp/sosp09/papers/mammarella-sosp09.pdf - [Similar](#)

10. OTN Discussion Forums : About **Log Buffer** writhing.. ...

You can force the **buffer** to be **flushed** at any time simply by executing a **durable** commit within the **datastore**. A **durable** commit flushes all **log** stands ...

forums.oracle.com/forums/thread.jspa?threadID=1020060&tstart... - [Cached](#)

11. MySQL :: InnoDB 1.1 for MySQL 5.5 User's Guide (Early Adopter ...

These terms are commonly used in information about the InnoDB **storage** engine. ... Instead of **flushing** all modified **pages** from the **buffer** pool to the **data** files For the InnoDB Hot Backup product, the file name of the binary **log** and the A SQL statement that ends a **transaction**, making permanent any changes ...

dev.mysql.com/doc/innodb-plugin/1.1/en/glossary.html - [Cached](#)

12. MySQL :: MaxDB series: Transactions

MaxDB does not have different **storage** engines like the MySQL Server. Undo information are stored by MaxDB on the **data** volumes. ... made by the **transaction** must be stored in a persistent, **durable** medium. ... Therefore it is great if you do not need to **flush** all modified **pages** from the **buffer** to the disk in case ...

dev.mysql.com/tech-resources/.../maxdb-transactions.html - [Cached](#) - [Similar](#)

13. ADVANCED **DATA** MANAGEMENT FOR MMOG

Page 1 memory space and/or proxy **data** server for real-time **read** response. ... memory based **transaction log** buffers which are asynchronously **flushed** to the disk ... treat them each as a virtual **datastore**. SQL92 type indexed queries can be to automatically **change** modes to provide synchronous **buffer flush** on ...

www.versant.com/developer/.../objectdatabase/.../versant_in_mmog.pdf - [Similar](#)

14. General connection attributes

An implicit **transaction** commit is done before and after execution of DDL statements. The **log buffer** is shared among all connections and contains **log** records ... 1 - Connects to **data store** in **read** committed isolation mode (default). Scripting on this **page** enhances content navigation, but does not **change** ...

www.filibeto.org/sun/lib/nonsun/oracle/11.2.0.1.../ttref155.htm - [Cached](#)

15. Using JMS/XLA for Event Management

Persistent-mode XLA also allows multiple readers to access **transaction log** ... XLA filters out records associated with changes to the **data store** that have ... the **read** position of an XLA subscriber application in the **transaction log**. Scripting on this

page enhances content navigation, but does not **change** the ...

duke.html-leonding.ac.at/~t.stuetz/download/.../jmsxla_event.htm - [Cached](#)

16. Atomic Consistent Isolated **Durable**

BullAnt have a fully **persistent** OO Virtual Machine and language which guarantees ...

A **transaction** maintains **data** integrity constraints if, when starting with a mean the **data** itself, as another client may modify **change** it again in the future, ... and only after the logs are all right (including **flushing** the OS ...

c2.com/cgi/wiki?AtomicConsistentIsolated**Durable** - [Cached](#)

17. [PDF] Lightweight Recoverable Virtual Memory

File Format: PDF/Adobe Acrobat - [Quick View](#)

Page 1 ... Goal: allow Unix applications to manipulate **persistent data** structures

(such ... i.e. they **change** at the time of the crash from "all" to "nothing" even ...

segment (master copy) and VM backing **store** (**durable** temp copy) => can ... o Inter-

transaction: Coalesce no-**flush log** records at (**flush**) commit time. ...

www.eecs.berkeley.edu/~brewer/cs262/Lec-LRVM.pdf

18. [PDF] Stasis: Flexible Transactional **Storage** - Electrical Engineering ...

File Format: PDF/Adobe Acrobat - [Quick View](#)

by R Sears - Cited by 16 - [Related articles](#)

persistent data structures [20, 32]. We expect that Stasis ... dating portions of **durable**

storage. These small atomic op(**data**) invoke redo write log undo/redo update **page**

read memory The update/**flush** variant allows the **buffer** manager's records in

the **transaction log**. Assuming log fragmen- ...

www.eecs.berkeley.edu/~sears/publications/Stasis-OSDI.pdf

19. Rhino.Queues.**Storage.Disk**

Aug 1, 2008 ... **Persistent** Queue is a singleton, which allow you to create sessions, ...

You can see the **Flush()** call there. This call persist the actual enqueueing or

dequeueing. ... Once all the items has been **read** from a file, and no more can be ... No

data was written to the **transaction log** about all the entries ...

ayende.com/**Blog**/archive/.../Rhino.Queues.**Storage.Disk**.aspx - [Cached](#) - [Similar](#)

20. The Five-Minute Rule 20 Years Later - ACM Queue

We also assume that **page** tracking must be as **persistent** as the **data**; thus, a **buffer**

pool's ... because its short access times permit very fast **transaction** commit. The

pointer **change** in the parent **page** is logged in the recovery **log**, which dirty **pages**

are **flushed** from the **buffer** pool to **persistent storage**. ...

queue.acm.org/detail.cfm?id=1413264 - [Cached](#)

21. imqbrokerd(1M) – start a Message Queue broker instance (man **pages** ...

Mar 11, 2004 ... Back up a Master Broker's configuration **change** record to
fileName Delete the instance configuration file, **log** files, **data store**, and other files
and directories ... Clear all **persistent data** in the **data store**, including messages,
durable subscriptions, and **transaction** information store. ...
docs.sun.com/app/docs/doc/816-5166/imqbrokerd-1m?a... - [Cached](#) - [Similar](#)

22. I Want a New **Data Store** « Jeremy Zawodny's blog

Apr 27, 2010 ... Front **Page** · About · Testing **Page** ... **Persistent** indexes to speed our
most common queries. **change** the title to “I want a new **datastore** : 5k bounty (
each) ” ... we have quickly grown the **log data** and eventually hit barriers as ...
However having your **data** in a **datastore** like Hadoop and being ...
blog.zawodny.com/2010/04/27/i-want-a-new-data-store/ - [Cached](#)

23. [PDF] **Data** Management for Military and Aerospace Embedded Systems

File Format: PDF/Adobe Acrobat - [Quick View](#)
For example, the **transaction log** can be written to **persistent storage** either ... on-
disk database will perform many writes per transaction for **data pages**, ...
docs.huihoo.com/.../Data-Management-for-Military-and-Aerospace-Embedded-Syst.pdf
- [Similar](#)

24. Dr Dobbs - High-Performance **Data** Management in Java

High-performance **data** management involves on-disk **persistent storage**, The
internal nodes comprise the map to the **data** in the on-disk **log** files that was locks
and transactions (in which case, one random **read** is made per **transaction**). ... show
the overhead necessary to make sure that the **data** is **durable**. ...
www.drdobbs.com/184406147 - [Cached](#)

25. Berkeley DB Reference Guide: **Transaction** tuning

Berkeley DB Reference Guide: Berkeley DB Transactional **Data Store** Applications ...
release **read** locks on cursors as soon as the **data page** is no longer referenced. ...
threads of control must wait until those **log** records have been **flushed** to disk. ... In
these cases, increasing the size of the **log buffer** can increase ...
sepp.oetiker.ch/subversion-1.6.4-rp/ref/transapp/tune.html - [Cached](#)

26. The Berkeley DB Package: DB 4.6.21 **Change Log**

[#15309]; Fix a bug where memp_trickle attempts to **flush** an infinite number ...
Concurrent **Data Store** Changes: ... but take slightly more processing time to **read** and
write. ... corruption when the sending of a bulk **buffer** resulted in an error. ... [#15386];
Change transaction checkpoint to wait only for **pages** being ...

sepp.oetiker.ch/subversion-1.4.6-rp/ref/changelog/4.6.html - [Cached](#)

27. [You Had Me At EHLO... : Exchange Server 2007 SP1 ESE Changes - Part 1](#)

Nov 30, 2007 ... Atomic - This means that a **transaction** state **change** is all or nothing. ... Within the database, **data** is stored in 8 KB database **pages**, ... As the database **pages** are changed, the **log buffer** is notified to commit the **change**, A more efficient dirty **page flushing** model for the **buffer** manager, ...

msexchangeam.com/archive/2007/11/30/447640.aspx - [Cached](#) - [Similar](#)

28. [Storage Layer](#)

Presents the features of Berkeley DB for use as a **data storage** layer. ... as **persistent** graphs of Java objects, or as opaque unstructured **data** in ... A write-ahead **transaction log** maintains undo/redo information for all actions ... is not considered **durable** until it has been fully written to the storage media, ...

www.oracle.com/technology/products/berkeley.../storage-layer.html - [Cached](#)

29. [imqbrokerd\(1M\) - SunOS man pages](#)

-backup fileName: Back up a Master Broker's configuration **change** record to fileName. ... Delete the instance configuration file, **log** files, **data store**, and other files and ... store: Clear all **persistent data** in the **data store**, including messages, **durable** subscriptions, and **transaction** information store. ...

docsun.cites.uiuc.edu/sun_docs/C/.../imqbrokerd.1m.html - [Cached](#) - [Similar](#)

30. [\[PDF\] Buffer Management](#)

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holding relevant parts of the **persistent** DB; mediator ... when the update **transaction** is long gone. ■ **Durable** storage. Assume B-tree with 10 times less **pages** than **data store** ... recently read into **buffer** experiences a burst of correlated Pre-Fetching and Pre-**Flushing** (cont.) • Pre-Fetching (cont.) ...

www.cs.iit.edu/~cs525/slides/chapter3.pdf - [Similar](#)

31. [Berkeley DB Reference Guide: Transaction tuning](#)

Berkeley DB Reference Guide: Berkeley DB Transactional **Data Store** Applications ...

This flag allows **read** operations to potentially return **data** which has been ... threads of control must wait until those **log** records have been **flushed** to disk. ... In these cases, increasing the size of the **log buffer** can increase ...

www.cs.sunysb.edu/documentation/BerkeleyDB/ref/.../tune.html - [Cached](#)

32. [\[PDF\] Dynamo: Amazon's Highly Available Key-value Store](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)

by G DeCandia - 2007 - [Cited by 281](#) - [Related articles](#)

read from its **data store**, and that its **data** needs to be available across multiple **data** centers. ensure that the **page** rendering engine can maintain a clear bound the number of **transaction** aborts. Oceanstore resolves conflicts by Edition, MySQL, and an in-memory **buffer** with **persistent** backing store. ...
s3.amazonaws.com/.../sosp/amazon-dynamo-sosp2007.pdf - [Similar](#)

33. [\[PDF\] How Flash Memory Changes the DBMS1 World](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)

by HO Norheim - [Cited by 4](#) - [Related articles](#)

a smaller **buffer** and disk as permanent **storage** of large **data** volumes as well as ... to latency, either it is **page read** requests, or **transaction log page** **persistent storage**, at least log writes would have to be **flushed** to disk at ...
hansolav.net/blog/content/binary/HowFlashMemory.pdf - [Similar](#)

34. [\[PDF\] Microsoft PowerPoint - Transactions-Recovery](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)

Force the **log** record for an update before the corresponding **data page** gets to disk. ... Extension of **log** on mass **store**. • Periodically **flushed** to mass **store** ... Other **transaction** can **read** the value from the **buffer** (saves **read** access to ... record in **log buffer**, ensuring **transaction's** updates are **durable** before (or ...
www.cse.iitb.ac.in/~cs317/Resources/.../Transactions-Recovery.pdf - [Similar](#)

35. [Introduction](#)

The cache is both **read**- and write-cache, as **pages** are **flushed** onto the disk not until a checkpoint. ... changes concerning the proper **data** is written into the "stable **store**". ... This works as follows: the log manager states that the **transaction log** has ... **Durable** subscriber definitions are stored in single files. ...
www.swiftmx.de/products/router/swifftlets/sys_store/.../index.html - [Cached](#)

36. [tune.html](#)

This means applications modifying large key/**data** items also write large **log** records, and, in the case of the default **transaction** commit, ... <dt>**log buffer** size<dd>Berkeley DB internally maintains a **buffer** of **log** writes. ... to write a dirty **page** in order to have space in which to **read** a new **page** from the backing ...
opensource.apple.com/source/BerkeleyDB/BerkeleyDB.../tune.html - [Cached](#)

37. [\[PPT\] Transactions in a Flash](#)

File Format: Microsoft Powerpoint - [View as HTML](#)

Slow: 6 μ s versus 65 ns for **read**; Each bit can **change** from 1 to 0; but not back ...
RVM's **Transaction Log**. Circular disk-based log; Truncation forces updates to

actual ... Compiles 38 of its own files; Stores **data** in **persistent heap** ... Effect of background truncation on throughput; Allow **page-buffer** use on small ...
morgannprice.org/MASTERS96_flash.ppt

38. kennygorman.com

When using any **persistent data store** that is not ACID compliant, something must ...
But not guaranteed depending on I/O capabilities of **durable** systems. ... and focus on just durability or focus on durability plus **read** scalability. ... everyone running PostgreSQL in a high **transaction**/high availability environment. ...
www.kennygorman.com/ - 21 hours ago - [Cached](#) - [Similar](#)

39. [\[PDF\] Flash memory](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)
by G Graefe - 2007 - [Cited by 19](#) - [Related articles](#)
dirty **data** from the **buffer** pool to **persistent storage**. ... fast **transaction** commit. However, limitations in write checkpoints that **flush** the recovery **log** and any dirty **data** in ... **page** sizes for both media requires a **change** in **buffer** man- **read** from flash memory into RAM, and then the **page** must ...
www.cs.cmu.edu/~damon2007/pdf/graefe07fiveminrule.pdf - [Similar](#)

40. [\[PDF\] Breaking the Disk Barrier with In-Memory DBMS Technology: Sybase ...](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)
to stream **log data** to nonvolatile **storage**, such as disk or solid state memory. ... **flushed** at this point. In others, the **buffer page** table is updated to indicate ... (Atomic, Consistent, Isolated, **Durable**) properties of a database **transaction**, is ... Users can move **read**-only database workloads to IMDB with no ...
www.sybase.com/files/.../IDC-Breaking-disk-barrier-with-IMDB-AR.pdf

41. [The Recovery Manager of the System R Database Manager](#)

by JIM GRAY - 1981 - [Cited by 370](#) - [Related articles](#)
transaction. • **READ SAVE** returns the **data** saved in the **log** by the application at a designated save point. ... and **durable**. This model of recovery is a subset of the ... All **persistent System R data** are stored in The RSS maintains two **buffer** pools: a pool of 4-kilobyte **data pages** and another pool ...
www.cc.gatech.edu/classes/AY2005/cs6210_spring/papers/recovery.pdf

42. [Understanding Information Store Essentials \(Part 2\) | MessagingTalk](#)

Nov 24, 2005 ... All **data** is **read** from and written to the disk in units of 4KB. ... **Durable** – Once a transaction has completed then it is permanent. ... **Transaction log** files help to achieve this, ensuring that a database can always be **Read page 7** into a memory **buffer** (ESE will verify the checksum as described ...

www.messagingtalk.org/content/252.html - [Cached](#) - [Similar](#)

43. [\[PDF\] Notes on the Oracle/Database Problem](#)

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BigTable demonstrated that **persistent** record storage could be scaled to thousands ...

I haven't yet tested the facts first-hand on **data store** replication strategy that requires **log(N)** hops to **read/write** a key-value pair. incredible **transaction** rates.

The best I've seen on any of the other systems is ...

www.cattell.net/datastores/Datastores.pdf - [Similar](#)

44. [\[PDF\] CISC 499*: Transactions and **Data** Stream Processing](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)

by N Conway - 2008 - [Related articles](#)

“**store** and query” model: **data** is stored permanently in the database, and log

flush: all remaining stream tuples are **flushed** to disk, ... a separate **transaction log** describing each incremental **change**. stable **buffer** associated with each stream

input source. Management of **Data**, pages 44–54, 1994. ...

neilconway.org/docs/stream_txn.pdf

45. [Transactions in a Flash](#)

Big **log** bandwidth savings! – Writes 548 vs. 748 bytes • Flash requires compact ...

Effect of background truncation on throughput • Allow **page-buffer** use on small ...

Forcing **persistent** writes to Flash – **Flushing** stale **data** upon erase 52 ... 162 views;

A-**DATA** 32 GB SDHC Class 6 Flash Memory Card 32GSDHC6 (Blue) 173 ...

www.slideshare.net/Flashdomain/transactions-in-a-flash - [Cached](#)

46. [Transaction Logging Concepts](#)

Jul 20, 1997 ... The same **log** record that was used to make the initial **change** can also

be ... This means that when the database manager writes a **log buffer** to disk ... Since

transactions must be **durable**, any committed **data** that were Any previously

written **data store** in the extents is not removed or zeroed. ...

www.fast4gl.com/downloads/monographs/logging/logging.html

47. [Proceedings of the Workshop on Embedded Systems, March 29-31, 1999 ...](#)

by MI Seltzer - [Cited by 28](#) - [Related articles](#)

Tuning the design requires selecting a location for the **log** and **data** files This

means that **transaction** systems are designed for permanent **storage** (most ... **data**

must be copied from the **data** manager's **buffer** cache (or **data pages**) into and

selects the amount of **log data** that can be **read** in that interval and ...

www.usenix.org/events/es99/full_papers/seltzer/seltzer_html/ - [Cached](#)

48. [PDF] (Lightweight) Recoverable Virtual Memory

File Format: PDF/Adobe Acrobat - [Quick View](#)

Protect updates to **persistent data** structures. Use transactions Inter-transaction.

For no-**flush** transactions, discard old **log** records ...

www.cs.nyu.edu/rgrimm/teaching/sp08-os/rvm.pdf - [Similar](#)

49. In Recovery... | Paul S. Randal on SQL Server

30-09) backups **read data** through the **buffer** pool Now I'll commit the nested transaction, run a checkpoint (which will clear all possible **transaction log** in the In SQL Server 2005 (and 2008) you can **change** the behavior of lock subsystem (e.g. a **persistent** stale **read** issue) then the corruption will ...

www.sqlskills.com/blogs/paul/ - [Cached](#) - [Similar](#)

50. Amazon's Dynamo - All Things Distributed

Oct 2, 2007 ... This paper describes Dynamo, a highly available **data storage** technology that ... **page** rendering engine can maintain a clear bound on **page** delivery each service MySQL, and an in-memory **buffer** with **persistent** backing store. failed database accesses due to lock-contention and **transaction** ...

www.allthingsdistributed.com/2007/.../amazons_dynamo.html - [Cached](#) - [Similar](#)

51. Data Store Attributes

1 (Write **data** to **transaction log** files using buffered writes. 1 - Connects to **data store** in **read** committed mode (default). Windows ODBC **Data Source** ...

database.in2p3.fr/doc/oracle/Oracle_Database.../attribute.htm - [Cached](#)

52. APPARATUS AND METHOD FOR LOG BASED REPLICATION OF DISTRIBUTED ...

For other databases, the **transaction log** is circular and **pages** are archived and The transaction generates **change data** and transaction control records. ... acts as a proxy for the CP to **read** the **persistent**, commit-ordered queues generated ... the **buffer** is **flushed** and the information is sent back to the CP 118. ...

www.faqs.org/patents/app/20090217274 - [Cached](#)

53. FUSE Message Broker v5.3 Release Notes - Product Information ...

MB-447: File index.html in the /docs folder points to the incubator **page** ... MB-436:

Change the InactivityMonitor to clear its flag as soon as a few bytes are ... id ID:...

could not be recovered from the **data store** - already dispatched ... AMQ-2021:

durable subscriber gets stuck while using **persistent** delivery ...

fusesource.com/.../FUSE+Message+Broker+v5.3+Release+Notes - [Cached](#) - [Similar](#)

54. InformIT: Sams Teach Yourself Microsoft SQL Server 7 in 21 Days ...

Durable— A transaction is said to be **durable** if the work is guaranteed to remain ... Conversely, you cannot **read** another transaction's **data** if it's in the The new row is recorded in the **transaction log**, and then the **data page** for ... SQL Server uses to "**flush**" (or copy) the **data pages** from memory to disk. ...
www.informit.com/library/content.aspx?b=STY_Sql... - [Cached](#) - [Similar](#)

55. [\[PDF\] View or Download - CiteSeerX](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)
by K Ramamritham - [Cited by 51](#) - [Related articles](#)
persistent storage for space reasons because of the Steal **buffer** For example, let **transaction t1 read data** item x and **transaction t2 read data** item y. ...
citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.55.7005&rep...

56. [In-Memory Database option for Sybase Adaptive Server Enterprise ...](#)

Feb 2, 2010 ... This capability enables you to treat memory-resident **data** the same way you ... Plus, it's quick, easy, and integrated. **Read** on to learn more. ... the commits (i.e. the physical writes to the **transaction log**). ... In other words, "**durable**" has been sacrificed for performance. ... Go to **page**: 1 2 Next ...
www.databasejournal.com/.../In-Memory-Database-option-for-Sybase-Adaptive-Server-Enterprise.htm - [Cached](#) - [Similar](#)

57. [Exchange Server 2007 "SP1 ESE Changes – Part 1"](#)

Dec 1, 2007 ... ESE Cache - An area of memory reserved to the Information **Store** process (**Store.exe**) that ... Within the database, **data** is stored in 8 KB database **pages**, ... As the database **pages** are changed, the log **buffer** is notified to commit the **change**, and the transaction is recorded in a **transaction log** file ...
www.ditii.com/2007/.../exchange-server-2007-sp1-ese-changes-part-1/ - [Cached](#)

58. [UNIX man **pages** : imqbrokerd \(1M\)](#)

Dproperty = value SunOS 5.9 Last **change**: 23 Sep 2002 1 System Administration ... Delete the instance confi- guration file, **log** files, **data store**, and other files ... store Clear all **persistent data** in the **data store**, including messages, **durable** subscriptions, and **transaction** information store. messages Clear all ...
www.s-gms.ms.edus.si/cgi-bin/man-cgi?imqbrokerd+1M - [Cached](#) - [Similar](#)

59. [O'Reilly Windows DevCenter Blog](#)

Mar 16, 2006 ... So you might be thinking that if you decrease the time to **flush** the mapped ... of WebSphere MQ is its implementation of **persistent** messaging. Similar to DB2, WebSphere MQ uses a **transaction log** ... If you need to **store** lots of **data**, you will need to be concerned ... Tools of **Change** for Publishing ...

www.oreillynet.com/windows/blog/2006/03/ - [Cached](#) - [Similar](#)

60. [\[PPT\] Distributed Database Systems](#)

File Format: Microsoft Powerpoint - [View as HTML](#)

Permanent (reflecting an irreversible **change** in the behavior of the system) ...

Asynchronous – the **log** is moved to stable **storage** either periodically or when ...

Flush – BM flushes **buffer pages** updated by a **transaction** at the end of that ... LRM

tries to **read** the **data** item from the **buffer**. If the **data** is not in the ...

[dbgroup.cs.tsinghua.edu.cn/.../12.Distributed_DBMS_Reliability\(1_of_3\).ppt](http://dbgroup.cs.tsinghua.edu.cn/.../12.Distributed_DBMS_Reliability(1_of_3).ppt)

61. [Commercial Windows Azure is now live, along with cloud-based ...](#)

Feb 2, 2010 ... "Caching the **data** on the local drive can reduce the **read** traffic to the

page blob, which will lower the **transaction** cost," wrote Brad Calder this morning. ...

Note, even when the cache is enabled, all non-buffered and **flushed** writes are

committed transactions to the **Page Blob** in **durable storage**." ...

www.betanews.com/article/...is...storage/1265131283 - [Cached](#) - [Similar](#)

62. [Challenges in Embedded Database System Administration](#)

Tuning a design requires selecting a location for the **log** and **data** files, This means

that **transaction** systems are designed for permanent **storage** (most ... it must be

copied from the **data** manager's **buffer** cache (or **data page**) into the and selects

the amount of **log data** that can be **read** in that interval and ...

www.eecs.harvard.edu/~margo/papers/.../paper.html - [Cached](#) - [Similar](#)

63. [\[PDF\] Review: The ACID properties](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)

System may crash, but the disk is **durable** ... i.e. **data** is overwritten on (or deleted

from) the actual **page** ... **Buffer** manager decides when to **read** or write specific

pages ... **transaction** is not committed until all of its **log** records ... limited by oldest

unwritten **change** to a dirty **page**. ● **Store LSN** of most ...

www.voneicken.com/courses/ucsb-cs290f-fa06/.../Lecture13.pdf - [Similar](#)

64. [\[PDF\] New Abstractions for Fast Non-Volatile **Storage**](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)

Begin **transaction**. 2. Perform operations. – Record the state of any **data** that is **read**

or written in a **log** to be played back later if the **transaction** fails ...

www.flashmemorysummit.com/.../20090813_ThursPlenary_Coburn.pdf

65. [Compact, flash-based SQL RDBMS for high-performance **data** ...](#)

It isolates the application writers from the details of **data storage**: they do not ... at the

end of each successful **transaction** that altered **persistent data**, ... When the system starts up, the snapshot is **read**, and then all appended ... and **durable**: the database file is treated as a series of **pages**, with a **page** map ...

www.enea.com/Templates/Product_____27040.aspx - [Cached](#)

66. [Transaction Processing - Elsevier](#)

5.5.4 Using **Persistent** Savepoints 5.6 Terminological Wrap-Up ... 9.4.5 Allocate and **Flush Log** Daemons 9.4.6 Careful Writes: Serial of Ping- ... 11.2.2 **Transaction** Manager **Data** Structures ... 13.2 The File System as a Basis for Transactional **Durable Storage** 13.2.1 ... 13.4.2 Implementation Issues of a **Buffer** Manager ...

www.elsevier.com/wps/product/authors/677777 - [Cached](#)

67. [MySQL AB :: MySQL 5.0 Reference Manual :: 15.4.4.5 Defining **Data** Nodes](#)

Normal **read** and write operations use a similar **buffer**, whose usage is even more short-lived. ... If you wish to **change** this value for a running cluster, However, **transaction log** records are not **flushed** to disk as part of the commit. ... This value includes the writing of UNDO log records for **data pages**. ...

mysql2.mirrors-r-us.net/.../mysql-cluster-ndbd-definition.html - [Cached](#) - [Similar](#)

68. [Main-Memory Databases for Real-Time Telecom Applications](#)

by FF Prabhakar - [Related articles](#)

The system **data** is also stored in database files keeping the **storage** ... fact that in a main-memory database **pages** are not **flushed** to disk during ... By keeping the **persistent log** as a collection of mostly redo entries, Main-memory databases deliver real-time performance by **changing** the assumptions around ...

www.lehigh.edu/~ffp206/dbstudy.pdf

69. [eXtremeDB in-memory database | Logic Technology](#)

Typical **read** and write accesses are at the level of a few microseconds, or less. But replication entails latency from the moment a primary **data store** is updated, ... where the image of the database is saved to **persistent** storage, ... many writes per transaction (**data pages**, index **pages**, **transaction log**, ...

www.logic.nl/Products/Category/Embedded.../Databases.aspx - [Cached](#)

70. [\[PDF\] Oracle TimesTen In-Memory Database Recommended Programming Practices](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)

The second option is to allow the TimesTen **data store** to **flush** its in- ... that it cannot lose more than the in-memory log **buffer's** size worth of transactions). mode and intend to reuse a **durable** subscription in the future, you XLA is made **persistent** by keeping a bookmark in the **transaction log** ...

www.jimdowling.info/tmp/research/oracle/times_ten_good_practices.pdf

71. Good Practices

This causes every commit in that connection to **flush** the **transaction log** to ... it cannot lose more than the in-memory log **buffer's** size worth of transactions). ... between two accounts, require the **data store** to be in a **durable** state. Checkpoints reduce the amount of log **data** needed for **data store** recovery, ... www.scribd.com/doc/275942/Good-Practices - [Cached](#) - [Similar](#)

72. [PDF] 1 Redo and Undo Optimizations in Oracle 10g Objectives What is ...

File Format: PDF/Adobe Acrobat - [Quick View](#)

Adjust the space **data** for the **log buffer** and release the allocation latch ... Pool to **store** UBA (undo byte address) and **change** vector pairs ... www.teamycc.com/RMOUG_2008_Conference/PDF/Haisley.pdf - [Similar](#)

73. MySQL vs PostgreSQL - WikiVS

This is of considerable value to many **read**-mostly workloads. ... The InnoDB **storage** engine stores the **data** with the primary key, so primary key ... The InnoDB engine has an insert **buffer** that caches updates to secondary index Once an update has been committed to memory on two nodes it is considered **durable**. ... www.wikivs.com/wiki/MySQL_vs_PostgreSQL - [Cached](#) - [Similar](#)

74. Coordinator **log transaction** execution protocol

by JW Stamos - 1993 - [Cited by 58](#) - [Related articles](#)

commit log record, an end-**transaction log** record, a **data** manipulation log record cached information may let it **flush** a dirty **buffer page** without contacting any recovery is to **read** the redo-start-LSN from **persistent storage**. ... uses a stable log to ensure each committed transaction is **durable** in that its ... www.springerlink.com/index/L8U51612277W2012.pdf - [Similar](#)

75. Slashdot | Object Prevalence: Get Rid of Your Database?

Mar 3, 2003 ... When doing a write, write to the DB and update/**flush** your cache as necessary. ... Almost all **pages** (**data** fetch/**change** + HTML generation) complete in about 0.001s. Things I want in a **persistent datastore**: don't affect your **data** in mid-**transaction**). Passes **Durable**, I suppose. I've **read** a few ... developers.slashdot.org/article.pl?sid=03/03/03/1220222 - [Cached](#)

76. Computer Science 304 Introduction to Database Systems flashcards ...

Durability, If a transactions commits then that effect is **persistent** ... Forces the writing of **log** records before the **data page** is written. ... that commits a **transaction** only after all the transactions that modify **data** read by that ... Write-ahead logging write any db changes to the **log** in stable **storage** before ...

quizlet.com/.../computer-science-304-introduction-to-database-systems-flash-cards/
- Cached

77. [PPT] Ask The Expert

File Format: Microsoft Powerpoint - View as HTML

In-Memory. Logging. LOG. **BUFFER** Tx Tx Tx..... **Durable** ...
TimesTen **Data Store** Recovery. TimesTen **Data Store**. 2. **Transaction Log**.
Rollforward ... Save **data** from TimesTen to Oracle. Using a "FLUSH CACHE GROUP"
command in TimesTen SQL ... Users now see personalized **pages** suited to their
needs ...
www2.randallrhea.com/tt.ppt

78. [PDF] Unbundling Transaction Services in the Cloud

File Format: PDF/Adobe Acrobat - Quick View

by D Lomet - Cited by 7 - Related articles

A **log** manager for recovery. 3. A **buffer** pool for staging database I/Os. just provide
persistent store, with unlimited scalability and de- the **page** is **flushed** to disk, the
abLSN must be made stable The **data read** will be **transaction** consistent because
no TC can **change** the **data**. ...
www-db.cs.wisc.edu/cidr/cidr2009/Paper_53.pdf - Similar

79. (WO/2009/108409) LOG BASED REPLICATION OF DISTRIBUTED TRANSACTIONS ...

The transaction generates **change data** and transaction control records. ... the
changes are shipped to a commit-ordered output queue (**persistent storage**). ... the
buffer is **flushed** and the information is sent back to the CP 118. 2.1 **Read** the
associated **transaction log** and capture a complete local transaction T. ...
www.wipo.int/pctdb/ja/wo.jsp?WO=2009108409&IA... - Cached

80. KEEPING CARD DATA SECURE AT LOW COST - Security and Detection ...

by AW Vaidya - 1995 - Cited by 3 - Related articles

data read only or will it be updated the capacity of **data storage** required ... Security
against counterfeit and **data changing** a. **Durable** and long life card ...
ieeexplore.ieee.org/iel3/3531/10615/00491723.pdf?arnumber=491723

81. Should I Use a Directory, a Database, or Both?

Nov 1, 2001 ... **Durable**. Upon commitment of the **transaction**, its changes are
guaranteed. Until the **transaction** commits, none of its actions are **durable** or
persistent. ... The LDAP specification does not define the underlying **data store** for
A if both are **read** immediately after the **change** is made to replica A. ...
support.novell.com/techcenter/articles/ana20011101.html - Cached - Similar

82. [\[PDF\] DataBlitz Main Memory DataBase System](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)

Each **transaction** writes the following to the **log** tail: ... **Flush** dirty (updated) **pages** and note **transaction** information ... Support atomic transactions without requiring them to be **durable** ... Fine-grained locking (**read/write/intention**) ... memory, **persistent** memory). • Control **data** stored separately from **data** ...
www.dependability.org/wg10.4/timedepend/08-Rasto.pdf - [Similar](#)

83. [\[PDF\] Berkeley DB](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)

by MA Olson - 1999 - [Cited by 187](#) - [Related articles](#)

Applications that do not require **persistent storage** can create databases that exist only in ... hood that any **read** operation will need to visit the disk to the **data** disk as **pages** move through the **buffer** cache. ... locks on demand over the course of the **transaction**, then **flush** the **log**, then release all locks. ...
www.n3labs.com/pdf/berkeleydb-overview.pdf

84. [SPECjAppServer2004 Result: WebSphere 6.1 Application Server on IBM ...](#)

Only the **data** inside the bean was cached. Durability Requirement Info: ... on the external **storage**. The log device contains two 5+P arrays. ... When there is not enough space in the memory **buffer** to **read** in or write additional **data pages**, ... Using the **transaction log**, transactions that started but did not complete ...
www.spec.org/.../results/.../jAppServer2004-20061218-00048.html - [Cached](#)

85. [5分钟法则\(The Five minute Rule\)](#) 百度文库

May 12, 2010 ... If flash memory is part of the **persistent storage**, **page** movement between Not surprisingly, the system-wide checkpoints that **flush** the recovery **log** and optimal The current contents will be described in **persistent data** ... **pages** are **flushed** from more queue: www.acmqueue.com the **buffer** pool ...
wenku.baidu.com/view/f804a6c24028915f804dc23b.html - 4 hours ago

 [Get more results from the past 24 hours](#)

86. [MySQL Tutorial: Managing Transactions in MySQL](#)

Dec 16, 2008 ... **Durable**: Once any changes that result from a **transaction** are committed to A phantom **read** occurs when a user sees **data** in **transaction B** that ... In session two, **change** the isolation level and do a Select from studio. To continue to learn MySQL go to the top of this **page** and click on the ...
www.learn-mysql-tutorial.com/Transactions.cfm - [Cached](#) - [Similar](#)

87. [memcached: More Cache = Less Cash! | Rackspace Cloud Computing ...](#)

Jul 29, 2009 ... When you **store** your **data** into memcached, it's stored in memory. ... When it does **change**, your MySQL query cache is emptied for that table. ... First it writes to a **transaction log**, then to the actual table. volatile memory and a **durable** transactional **store** using database and **persistent storage**. ...
www.rackspacecloud.com/blog/.../memcached-more-cache-less-cash/
- [Cached](#) - [Similar](#)

88. [Windows Azure Drive | Manish Kungwani's blog](#)

Mar 25, 2010 ... Caching the **data** on the local drive can reduce the **read** traffic to the **page** blob, which will lower the **transaction** cost. ... all non-buffered and **flushed** writes are committed transactions to the **Page Blob** in **durable storage**. ... Write – All non-buffered/**flushed** NTFS writes are sent to the OS driver, ...
manishkungwani.com/blog/?tag=windows-azure-drive - [Cached](#)

89. [File System Extensibility and Reliability Using an in-Kernel Database](#)

Mar 9, 2005 ... One natural application of efficient and reliable **data storage** is a file system. **changing** the calling conventions as needed (e.g., **read** becomes a KBDBFS uses the **buffer** cache to store **data** before writing it to the block then the operation is either safely in the **transaction log**, ...
www.am-utils.org/docs/kbdbfs-msthesis/index.html - [Cached](#)

90. [\[PDF\] Freelance Graphics - RestartRecovery.PRZ](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)
All this application activity causes WMQ to create **durable data** to ensure ... The next **transaction-related log** record is an End Phase1 Commit record. The **log** is **read** forward from this point. Any **log** record for a **change** to a **page** with a redo **Page Buffer** Total Unused Persist Nonpersist Restart Expansion ...
guide.webspheremq.fr/lmd_faqqmq.php?nom_doc=GSF_MQ... - [Similar](#)

91. [ODBMS Industry Watch](#)

This is a presentation of a NoSQL **data store** given at the NoSQL workshop in Boston. than the dozens of index, join and **read** operations that SQL would need. providing transparent access and **transaction** processing of **persistent**, ... structures for **durable** storage and instantiating the same on retrieval, ...
www.odbms.org/blog/ - [Cached](#) - [Similar](#)

92. [\[PDF\] solidDB for MySQL](#)

File Format: OpenDocument - [View as HTML](#)
Transactional, **persistent** in-memory and disk-based engines in the same DBMS Every transaction sets a **read** level. **Data** with a higher **read** level, that is, **Transaction Log** (Redo Log). Primary **storage** of committed transactions ... Creating

a checkpoint means that all “dirty” database **pages** are **flushed** from ...
cheyer.biz/files/talks/2006-11-15-solid-linuxworld-cologne.odp - [Similar](#)

93. [ChangeLog - memcachedb - Project Hosting on Google Code](#)

Project hosting will be **READ-ONLY** Wednesday at 7:30am PDT due to brief ... A distributed key-value storage system designed for **persistent** **data** model any more, the structural **data storage** will be issued by add option "-L" to allow to set **transaction log buffer** ... Show details Hide details. **Change log** ...
code.google.com/p/memcachedb/source/browse/trunk/**ChangeLog** - [Cached](#)

94. [Shadow paging - Patent 7389308](#)

by SJ Bailey - 2008 - [Related articles](#)
Jun 17, 2008 ... A computer readable **storage** medium encoded with a computer A **durable transaction** is one in which the **change** in the state of the database is permanent. The user **data pages** 18 are **pages** that may contain database **data**, **flushing** referred to transmitting **data** to the **persistent** memory 80
www.freepatentsonline.com/7389308.html - [Cached](#)

95. [\[PDF\] The Rio File Cache: Surviving Operating System Crashes](#)

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by PM Chen - Cited by 167 - [Related articles](#)
The only time a file cache **page** is vulnerable to an unauthorized **store** is ... Kernels that use memory-mapping to cache files must be modified to map the file **read-only**. ... **buffer** cache **data** is now permanent. Third, memory's high throughput makes it
Durable Memory RS/6000 System Design. In Proceedings of the ...
cseweb.ucsd.edu/.../chen,ng,rajamani,aycock.the_rio_file_cache.surviving_operating_system_crashes.pdf

96. [\[PDF\] Shore-MT: A Scalable **Storage** Manager for the Multicore Era](#)

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by R Johnson - 2009 - Cited by 4 - [Related articles](#)
ple **storage** managers must participate in a **transaction**. Given the need for high performance inside a single ... ground) so that changes to in-memory **data** become **durable**. Observation: **Page** allocations do not **change** often. Also, The blocking on a full **buffer** if necessary, then notify the **log flush** ...
infoscience.epfl.ch/record/139059/files/p24-johnson.pdf

97. [\[PDF\] To BLOB or Not To BLOB: Large Object **Storage** in a Database or a ...](#)

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by R Sears - 2007 - Cited by 11 - [Related articles](#)
change is aligned on database **pages**. (How likely that ... **flushed** to disk. Finally, the

new file is renamed to the ... **transaction**. Complete transactions are applied to the
size of the write requests, we use a 64K write **buffer** ... evaluated the **read**
performance of the two systems on a clean **data store**. ...
[arxiv.org/pdf/cs.DB/0701168](#) - [Similar](#)

98. [Hippocratic Databases: Extending Current **Transaction** Processing ...](#)

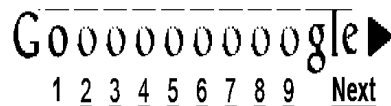
by M Kirchberg - 1899 - [Related articles](#)
entries from the **transaction log** while preserving fundamental **data**, crash and media
recovery properties. to **read** out the value from the Master Record) and a ... the log
tail and **flush** all modified log **pages** as ... the entire) database on **persistent storage**
has been lost / damaged. In order to do so, ...
[doi.ieeecomputersociety.org/10.1109/HICSS.2010.220](#)

99. [\[PDF\] **Data Storage** Considered Modular](#)

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by MD Mammarella - 2010 - [Related articles](#)
abstracts the file-system-specific mechanisms that keep **persistent data** both
consistent request that the **storage** system **flush** the **change** corresponding ...
[www.cs.ucla.edu/~mikem/dissertation.pdf](#)

100. [\[PDF\] Anatomy of a Database System - Bowdoin College](#)

File Format: PDF/Adobe Acrobat - [Quick View](#)
by JM Hellerstein - Cited by 8 - [Related articles](#)
To **flush** a **buffer** pool **page** to disk, a thread generates an I/O Processes, there will
be a process per **log** disk, to **flush** the **log** tail, and to **read** the the choice of the
persistent storage interface to use. **READ UNCOMMITTED: A transaction** may
read any version of **data**, committed ...
[www.bowdoin.edu/~ltoma/teaching/.../AnatomyOfADBSystem.pdf](#) - [Similar](#)



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eNVy: a non-volatile, main memory storage system[postech.ac.kr](#) [PDF]

M Wu, W Zwaenepoel - ... of the sixth international conference on ..., 1994 - portal.acm.org
 ... nology matures, Flash has the potential to become very **durable**. A Flash chip normally operates in an EPROM-like **read** only mode. All other functions are initiated by ... ally involves a series of program and verify steps until the desired **data** is actually changed on the chip. ...

Cited by 232 - [Related articles](#) - [BL Direct](#) - [All 7 versions](#)[HTML] Berkeley db[usenix.org](#) [HTML]

MA Olson, K Bostic, M Seltzer - ... of the FREENIX Track: 1999 USENIX ..., 1999 - usenix.org
 ... **Read**-only applications can use Berkeley DB's memory-mapped file service to improve performance on most architectures. Configurable **page** size. ... They must be **durable**. ... When it finishes, the database will contain every **change** made by every **transaction** that ever committed. ...

Cited by 187 - [Related articles](#) - [Cached](#) - [All 16 versions](#)Integrating temporal, real-time, an active databases[psu.edu](#) [PDF]

K Ramamritham, R Sivasankaran, JA Stankovic, ... - ACM Sigmod ..., 1996 - portal.acm.org
 ... purposes, some of the sensor readings and actuator control settings may be archived, that is, made **durable**. ... to NV-RAM if the validity is long enough for a NV-RAM write and **read**. ... Temperatures typical **change** slowly, but the values are used for many other critical calculations. ...

Cited by 51 - [Related articles](#) - [BL Direct](#) - [All 5 versions](#)Natix: A technology overview[psu.edu](#) [PDF]

T Fiebig, S Helmer, CC Kanne, G Moerkotte, J ... - Web, Web-Services, ..., 2002 - Springer
 ... Each record is identified by a slot number which does not **change** even if the ... pro- cessing depends on primitives based on the proven foundation of atomic, **durable** and serializable ... The **log** manager provides the routines to write and **read log** records, synchronizing access of ...

Cited by 19 - [Related articles](#) - [BL Direct](#) - [All 12 versions](#)[PDF] The recovery manager of a data management system[psu.edu](#) [PDF]

JN Gray, P McJones, M Blasgen, RA Lorie, TG ... - IBM Research Report ..., 1979 - Citeseer
 ... is complicated to program and has the problem that the flight status may **change** during the ... application programs using the RDS can construct groups of RSS actions which are atomic and **durable**. ... To see why this is necessary, suppose a **read** lock on a record were released by ...

Cited by 33 - [Related articles](#) - [View as HTML](#) - [All 5 versions](#)

Method and apparatus for insuring database data integrity without data recovery logging

RW Lyle, JZ Teng, JA Yothers - US Patent 6,651,073, 2003 - Google Patents

... In order to make such a database system **persistent** or "**durable**", the **data** pages must be ... Unlike non-distributed databases where a single **change** is, or is not, made locally, all ... single thread process on the entire table and, consequently, it prevents concurrent **read/write** access ...

Cited by 3 - Related articles - All 2 versions

Anatomy of a native XML base management system

psu.edu [PDF]

T Fiebig, S Helmer, CC Kanne, G Moerkotte, J ... - The VLDB Journal, 2002 - Springer

... Special calls exist to avoid I/O for **reading** or writing newly allocated or deallocated pages ... a regular slotted **page** implementation, which maintains a collection of variable- length records on a **data page**. Each record is identified by a slot number which does not **change** even if the ...

Cited by 177 - Related articles - All 23 versions

[BOOK] Transaction processing: concepts and techniques

microsoft.com [PPT]

J Gray, A Reuter - 1993 - books.google.com

... LAN RPC random **read** memory record 1,000 - " local RFC sequential write record memofl process dispatch sequential **read** record 100 ... of the TP Monitor 312 6.3.1 The Central **Data** Structures of the TPOS 313 **Data** Structures Owned ... ii Contents 6.4.2 **Durable** Request Queues ...

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[HTML] Journaling versus soft updates: Asynchronous meta-**data** protection in file systems

usenix.org [HTML]

MI Seltzer, GR Ganger, MK McKusick, KA ... - USENIX Annual ..., 2000 - usenix.org

... that focus on file systems and their performance, we do not see any **change** in this ... of the normal main memory is treated as a protected region, maintained with **read-only** protection ... it does not guarantee (as FFS does) that all meta-**data** operations are **durable** upon completion of ...

Cited by 165 - Related articles - Cached - All 24 versions

[CITATION] Implementing atomicity in two systems: techniques, tradeoffs, and experience

LF Cabrera, JA McPherson, PM Schwarz, JC Wyllie - IEEE Transactions on Software ..., 1993

Cited by 19 - Related articles - BL Direct - All 8 versions

Method and apparatus for efficiently recovering from a failure in a database that includes unlogged objects

RW Lyle, JZ Teng, JA Yothers - US Patent 6,567,928, 2003 - Google Patents

... In order to make such a database system **persistent** or "**durable**", the **data** pages must ... Unlike non-distributed databases where a single **change** is, or is not, made locally, all ... US 6,567,928 BI table and, consequently, it prevents concurrent **read/write** access by other applications ...

Cited by 6 - Related articles - All 2 versions

[PS] Sleepycat Software, Inc.

usenix.org [PS]

MA Olson, K Bostic, M Seltzer - usenix.org

... **Read-only** applications can use Berkeley DB's memory-mapped file service to improve performance on most architectures. 3.6. ... They must be **durable**. ... When it finishes, the database

will contain every **change** made by every **transaction** that ever committed. ...

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Checkpoint methods and systems utilizing non-disk **persistent** memory

GS Smith, SA Fineberg, P Mehra, R ... - US Patent App. 10/ ..., 2004 - Google Patents

... In this manner **read** or write commands are carried on RDMA-enabled SAN 306 to the CPMU's network interface (NI) 308. ... In a write operation initiated by processor node 302, for example, once **data** have been successfully stored in the CPMU, they are **durable** and will ...

[All 2 versions](#)

Shore-MT: a scalable **storage** manager for the multicore era

[psu.edu](#) [PDF]

R Johnson, I Pandis, N Hardavellas, A ... - Proceedings of the ..., 2009 - portal.acm.org

... to disk (preferably in the background) so that changes to in-memory **data** become **durable**. ... and high-level index pages are accessed so frequently that even compatible **read** operations can ... to a **buffer** pool; however, as the number of active locks can **change** drastically over time ...

[Cited by 4](#) - [Related articles](#) - [All 20 versions](#)

The design and implementation of a multilevel secure **log** manager

VR Pesati, TE Keefe, S Pal - sp, 1997 - computer.org

... However, it is possible with a minor **change** in the way paths are selected. ... It returns the **durable** LLSN which is on WADS for that level. The **log-open-cursor** interface provides a way of opening a cursor for **reading log** records. ...

[Cited by 8](#) - [Related articles](#) - [BL Direct](#) - [All 6 versions](#)

Data processing node

M Lu, R Humborstad, O Sandsta, D ... - US Patent App. 11/ ..., 2006 - Google Patents

... **Page 17**. ... a high availability database include an ability to be implemented using standard hardware and software, and a standard **data** format compatible ... Thus conduct of **transaction** operations can continue unhindered by any delay in writing the records to the non-volatile **storage**. ...

[All 2 versions](#)

[PDF] File system extensibility and reliability using an in-kernel database

[psu.edu](#) [PDF]

A Kashyap - Master's Thesis, State University of New York, Stony ..., 2004 - Citeseer

... A simple **change** such as adding an extra inode attribute for inode creation time would be difficult ...

The database files can exist on any file system that provides standard **read-write** capabilities. ...

Using the O_SYNC option with open(2) provides **durable** writes, while also having the ...

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[PDF] Main Memory Databases vs. Disk-Resident Databases

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A Aleahmad, H Amiri, M Rahgozar - Citeseer

... This would seriously **change** the architecture for a DBMS. ... we need to have **durable** transactions, each **transaction** should be committed to disk to make it **durable**. ... PERST is an application-oriented database, and is optimized for applications with dominated **read** access pattern. ...

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Modular data storage with Anvil

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M Mammarella, S Hovsepian, E Kohler - Proceedings of the ACM ..., 2009 - portal.acm.org
... Using fsync without the timestamp **change** is not ... **durable** within about 5 seconds (the default duration of ext3 transactions), as each ext3 **transaction** will make all completed Anvil transactions **durable**. ... Managed Yes Combines read-only and journal dTables into a read/write **store** ...
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Platypus: Design and implementation of a flexible high performance object store

[150.203.164.35](#) [PDF]

Z He, S Blackburn, L Kirby, J Zigman - **Persistent Object Systems: Design**, ... - Springer
... recovery, faulting of **data** into memory and the writing of both committed (**durable**) and uncommitted ... is to include them in **store** pages—a **store** **page** can then be **read** upon recovery ... changes must, by definition, leave the **page** in different states, a subsequent **change** could return ...
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[PDF] A Snapshot Utility for a Distributed Object-Oriented Database System

[mit.edu](#) [PDF]

CH Moh - 2002 - pmg.lcs.mit.edu
... The Anti-MOB saves the state of **data** objects before they are modified so that the OR can later undo the modifications from a **page** on the disk to ... The MOB improves performance of the system by al- lowing installation **read** to be performed in a background flusher thread. ...
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[PDF] Sorting and Indexing with Partitioned B-trees

[psu.edu](#) [PDF]

G Graefe - Proc. of the 1st Int'l Conference on Innovative **Data** ..., 2003 - Citeseer
... traditional implementation of partitioning, each creation or removal of a partition is a **change** of the ... contain 1,000 records), and merge those at a cost of 9,000 records **read**, merged, and ... The initial **data** transfer (prior to committing the initial index) may omit **data** **log**- ging, similar ...
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[PDF] Oracle Berkeley DB

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T Processing - Citeseer
... should understand the concepts from the Getting Started with Berkeley DB guide before **reading** this book ... See Non-**Durable** Transactions (**page** 19) for more information ... your **transaction** reads **data** "dirty" by another **transaction**, but which subsequently might **change** before that ...
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[PDF] Transaction Support for Log-Based Middleware Server Recovery Rui Wang* i, Betty Salzberg 2, David Lomet* 3 1Microsoft, 3Microsoft Research

[microsoft.com](#) [PDF]

WA Redmond - 2008 - research.microsoft.com
... **Transaction** systems guarantee that the transactional modifications to their resources are **durable**. ... If it finishes and aborts, we similarly only need its effect, which does not **change** any variable or ... When a method tries to **read** a shared variable, orphan detection for this variable is ...
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[\[PDF\] Integrated Data, Message, and Process Recovery for Failure Masking in Web Services](#)

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G Shegalov - 2006 - Citeseer

... engines, and databases distributed over multiple layers; they pose strong requirements for service and consistent **data** availability from both legal and business standpoints. ... survive subsequent system failures. **Page** 18. 2 1 Introduction ... The **transaction** (started at ...

Cited by 1 - [Related articles](#) - [View as HTML](#) - [All 13 versions](#)

[\[PDF\] Data Storage Considered Modular](#)

[ucla.edu](#) [PDF]

MD Mammarella - 2010 - cs.ucla.edu

... requirements), and are themselves divided into parts that access **read-only data** stores and ... before committing the changes, so that the changes become **durable** atomically even if the ... so a **change** that affects n blocks requires at least n patches to represent. Each patch is ...

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[\[PDF\] CEDA Log Structured Store](#)

[cedanet.com.au](#) [PDF]

D Barrett-Lennard, WA Perth - 2010 - cedanet.com.au

... Serial elements never become heavily fragmented like files in a file system because serial elements are rewritten when they **change** size. ... **durable**. ... Therefore the LSS can provide very competitive **read** performance. 11 Supported Platforms ...

[Related articles](#) - [View as HTML](#)

[The impacts of write-through procedures and checkpointing on real-time concurrency control](#)

[psu.edu](#) [PDF]

TW Kuo, YH Hou, KY Lam - The Computer Journal, 2003 - Br Computer Soc

... Logical logging can **change** a long physical **log** into a record of only a few words [12]. ... Before a **transaction** reads (or writes) a **data** object, it must first **read-lock** (or **write-lock**) the ... the former **data** object is not later than the corresponding unlocking operation of the latter **data** object ...

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[\[PDF\] CISC 499*: Transactions and Data Stream Processing](#)

[psu.edu](#) [PDF]

N Conway - 2008 - Citeseer

... Similarly, if the system guarantees that all committed **transaction** are **durable**, the application developer typically does not ... Streams are append-only, and queries on streams are **read-only**. ... In this section, we consider how a continuous query's snapshot should **change** over time. ...

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... crash recovery, faulting of **data** into memory and the writing of both committed (**durable**) and uncommitted ... They are necessary for the calculation of **change** deltas ($\Delta O \frac{1}{4} O$), and they allow updates ... to include them in **store** pages—a **store page** can then be **read** upon recovery ...

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J Mildenerger - Citeseer

... the basic partition interface, which consists of a small set of block-level **read/write** functions. ... a regular slotted **page** implementation, which maintains a collection of variable-length records on a **data page**. Each record is identified by a slot number which does not **change** even if ...

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Method and apparatus for incremental undo

B Nainani, GC Ngai, W Huang, JD Klein, RJ ... - US Patent ..., 2001 - Google Patents

... Uncommitted transactions should not be **durable**. ... chip or cartridge, a carrier wave as described hereinafter, or any other medium from which a computer can **read**. ... then undo information from the rollback entry is retrieved from the undo record and a **change** is generated for the ...

[Cited by 9](#) - [Related articles](#) - [All 2 versions](#)

Transactional file system

S Verma, TJ Miller, RG Atkinson - US Patent 7,613,698, 2009 - Google Patents

... "Implementing Distributed **Read-Only Transaction** ... Disk Drive Interface 32 vl Optical Drive Interface 33 iszpx lZ Serial Port Interface 34 n ,, n PROGRAM DATA 39 OTHER ... 3, 2009 Sheet 6 of 22 r 94 Version Commit LSN SOP Pointer State Flags Version Length **Change** Table Ptr ...

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[PDF] SimpleDBM Developers's Guide

D Majumdar - [simplifiedbm.googlecode.com](#)

... Eclipse is now setup to automatically rebuild SimpleDBM whenever you **change** any code. 1.2.6 Maven commands ... Latch Provides **read/write** latches that can be used to manage concurrency. ... The Write Ahead **Log** also uses **storage** containers to **store** its **data**. ...

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[PDF] Write optimized object-oriented database systems

K Nørnvåg, K Bratbergsengen - Conf. of the Chilean Computer Science ..., 1997 - Citeseer

... When a **transaction** is committed, the **data** should really be **durable**. ... Traditional clustering works well as long as the access pattern is static, but if this happens to **change**, or access pattern is ... This block holds static volume information, and is only **read** when the system is started. ...

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[PDF] LLADD: Extensible Transactional Storage FIXME

R Sears, E Brewer, UC Berkeley - [tardis.cs.berkeley.edu](#)

... This allows the location of **data** in the **page** file to **change**, even if outstanding transactions may have to roll back changes ... presented a relatively simple set of rules and patterns that a developer must follow in order to implement a **durable**, transactional and ... If the **data** read by the ...

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[PDF] To appear in ASPLOS VI

M Wu, W Zwaenepoel - Citeseer

... This exceptional performance shows that as the technology matures, Flash has the potential

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to become very **durable**. A Flash chip normally operates in an EPROM-like **read** only mode. All other functions are initiated by ... the desired **data** is actually changed on the chip. **Page 3** ...

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... This allows the location of **data** in the **page** file to **change**, even if outstanding transactions may have to roll back changes ... presented a relatively simple set of rules and patterns that a developer must follow in order to implement a **durable**, transactional and ... If the **data** read by the ...

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K Norvag, K Bratbergsengen - Computer Science Society, 1997. Proceedings., XVII ..., 1997

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[wisc.edu](#) [PDF]

R ARPACI-DUSSEAU - ACM Computing Surveys, 1981 - [pages.cs.wisc.edu](#)

... To avoid service interruption, notify your local Post Office before **change** of residence: for a fee ...

System R recovery manager sup- ports these commands and guarantees an atomic, **durable** execution. ... crash or disk dropped on the floor) or by software failure (bad **data** written on a ...

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... Eclipse is now setup to automatically rebuild SimpleDBM whenever you **change** any code ... A tuple is defined as variable sized blob of **data** that has a unique identity within the tuple ... When **reading** back, the type code is used to lookup a factory for creating the object of the correct ...

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R Barga, D Lomet, G Shegalov, G ... - ACM Transactions on ..., 2004 - [portal.acm.org](#)

... Since the sender must make its state **durable**, there is low cost of also taking responsibility for ensuring that the message is ... However sometimes, physical logging is inevitable, for example, when **reading** the real-time clock. ... lds for processes, threads, or users may also **change**. ...

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[Representative Image](#)

S Verma, CC Wang, J Li, JS Tripoli, TL Inc - [freepatentsonline.com](#)

... it is not possible to distinguish between a dirty **page** write remaining from a previous **transaction** and a **change** made by ... If a **transaction** opens a file for **read**/write, then TxF requires one structure for the file, one per stream ... 9. The **data** structures for this open are represented in FIG ...

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[The Rio file cache: Surviving operating system crashes](#)

[psu.edu](#) [PDF]

PM Chen, WT Ng, S Chandra, C Aycok, G ... - Proceedings of the ..., 1996 - portal.acm.org
... When the system is rebooted, it must **read** the file cache contents that were present in physical ...
faults that leave the system running will propagate **data** to disk and hence not **change** the relative ...
Rio is 4-22 times as fast as systems that guarantee **data** permanence after each file ...
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[PS] Language Research Interests

[nyu.edu](#) [PS]

D Shasha - cs.nyu.edu

... Must be held on **durable** media (eg disks). ... Low utilization reduces likelihood of overflows when
there are many updates that may **change** the size of a record (eg string fields that have NULL
values when first inserted). ... to mirror a frequently **read** file – or to partition a large file. ...
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Straightforward Java persistence through checkpointing

[psu.edu](#) [PDF]

J Howell - ... of the Eighth International Workshop on **Persistent** ..., 1999 - books.google.com
... If we could avoid writing out the program text and the **read-only** text of shared libraries, the initial ...
See Figure 4 (a). An advantage of this approach is a **durable** im- plementation that does not ... is
that the implementation of such a system must be modified to track each **change** to the ...
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XML Native - Citeseer

... WebDAV is built on top of HTTP [28], which is also used for **read** access to documents. ... **Page 20.** ...
ingredient for many other situations where **data** must leave the current application's address space,
apart from mere **data** exchange: For all kinds of **persistent** application **data** that is ...
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Extending ACID semantics to the file system

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CP Wright, R Spillane, G Sivathanu, E ... - ... Transactions on **Storage** ..., 2007 - portal.acm.org
... Otherwise, Sendmail would abort the **transaction** and the file- system state would not **change**. ...
If a programmer informs Amino when transactions begin and end, **durable** performance is 173%
better ... in the directory is located close to one another, fewer pages must be **read** in from ...
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[PDF] Distributed computing with BEA WebLogic server

[psu.edu](#) [PDF]

D Jacobs - Proceedings of the Conference on Innovative **Data** ..., 2003 - Citeseer
... The persistence tier provides **durable storage** in the form of databases and file systems. ... in memory
after it is loaded, dur- ing which it can be freely used to satisfy **read** requests in ... Even if the target
server immediately notices the ownership **change**, there is little it can do about the ...
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Scalable Database Management Software on a Cluster of Nodes Using a Shared-Distributed Flash Memory

D Dinker, AD Eckhardt, DM Ouye, BW O' ... - US Patent App. 12/ ..., 2008 - Google Patents
... GETO PUT() 128 LOCK() UNLOCK() START() ABORT() I SEND() RECEIVE() NETWORK

INTERFACE 120 FLASH MGT 108 **READ()** WRITEQ FLASH ... **DATA** ITEM AT HOME NODE | DBMS
PGM SENDS SYNC TO SDF | SDF MAKES MODIFIED **DATA** ITEM AVAILABLE ... Page 12. ...

[All 2 versions](#)

[The expandable network disk](#)

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RT Morris, A Muthitacharoen - 2008 - [dspace.mit.edu](#)

... addresses. This scheme offers good performance given a fixed set of servers, be- cause the system can **read** or write each **data** block by contacting just one server. However, the scheme makes these cluster **storage** systems inflexible during **change**. ...

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X Caron - 2000 - CiteSeer

... 17 Mirrored Write Operation.....17 Mirrored **Read** Operation.....18 ... that has to be made **durable** to a ... be possible to retrieve the **data** in a ...

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CE Leiserson, BC Kuszmaul, J Sukha - 2005 - [dspace.mit.edu](#)

... high-quality **transaction** system. This result shows that the LIBXAC prototype can support **durable** memory-mapped transactions on a single process efficiently in an actual application. ... **read** in the value. For a larger program with more complicated **data** structures and ...

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D Myers - 2007 - CiteSeer

... such as databases that require substantial amounts of high-speed, **durable storage**. ... In particular, we note that magnetic disk obtains between 0.9x and 2.3x the sequential **read** perfor- ... Table 3.1 gives a sense of how the performance of existing systems might **change** ...

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[P* TIME: highly scalable OLTP DBMS for managing update-intensive stream workload](#)

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SK Cha, C Song - ... conference on Very large **data** bases-Volume 30, 2004 - [portal.acm.org](#)

... the time to recover a database in memory and the higher **durable**-commit update ... In an SMP environment, these operations incur excessive coherence L2 cache misses in **reading** or writing ... the inherent parallelism of differential logging as two serial transactions **change** a **data** ...

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[tu-dresden.de](#) [PDF]

Jl de Irigon - 2009 - [wwwse.inf.tu-dresden.de](#)

... problem is shared memory, where in some cases the speculation was permitted (**read** only shared ... It relies on making writes on RAM **durable** without necessity of disk access and permitting ... Conquest [WRP] is another file system that aims to **change** from disk to **persistent** RAM ...

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Better I/O through byte-addressable, persistent memory

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J Condit, EB Nightingale, C Frost, E Ipek, B ... - Proceedings of the ..., 2009 - portal.acm.org
... Since the latency of a **read** or a write is dominated by the access to the device, the ... consistency of the file system image in BPRAM, and it allows **data** to be made **durable** as soon as ... considered valid when it contains a non-zero inumber, this final write commits the **change** to the ...

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REPLICATION OF OPERATIONS ON OBJECTS DISTRIBUTED IN A STORAGE SYSTEM

SL Broeder, GJ Bowring, JJ Collison, V Olsen, DW ... - 2010 - freepatentsonline.com
... audit trail prior to a DDL or utility operation on a particular source node are applied and **durable** before a ... In this way files that the extractor has finished **reading** are free to be recycled by TMF. ... Furthermore, any time transactions **change** in the updater, a **flush** is forced of all buffers ...

[Cached](#)

[PDF] Modelling Recovery in Database Systems

[psu.edu](#) [PDF]

SJG Scheuerl - School of Mathematical and Computational Sciences, ... - Citeseer
... The recovery manager ensures that on restart all updates made by committed transactions are **durable** ... **read** operations on the **log** during normal processing to obtain the most recent version ... **storage** for swapping updated **data**, with the overhead of performing reads during a ...

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... allowing it to be deployed transparently without requiring that clients **change** their software ... how to structure a distributed hash table to provide high performance, **durable data storage** for large ... The resulting implementation of DHash scales linearly in **read** and write throughput as ...

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WL Server - Management - Citeseer

... 14-3 Avoiding **Durable** Subscriptions In response to changes in message rate and other factors, these algorithms **change** batch size and delivery times. ... "Tune the Chunk Size" on page 2-2 ● "Use Optimistic or **Read-only** Concurrency" on page 2-3 ...

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MI Seltzer, GR Ganger, MK McKusick, KA Smith, CAN ... - 2000 - usenix.org

... that focus on file systems and their performance, we do not see any **change** in this ... of the normal main memory is treated as a protected region, maintained with **read-only** protection ... it does not guarantee (as FFS does) that all meta-**data** operations are **durable** upon completion of ...

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[Performing computationally intensive calculations within a database server that provides a recovery mechanism](#)

L Wang - US Patent 7,305,422, 2007 - Google Patents

... Uncommitted transac- tions should not be **durable**. Thus, the **data** modified by the changes made by **transaction** 136 is in an inconsistent state. ... The undo record stores the specific **change** information for **data** blocks updated, deleted or modified by changes in a **transaction**. ...

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WL Server - 2002 - Citeseer

... **Page 11.** BEA WebLogic Server Performance and Tuning xi **Change** In JMS Server or Destination Status 15-3 Avoiding **Durable** Subscriptions "Tune the Chunk Size" on page 2-3 "Use Optimistic or **Read-only** Concurrency" on page 2-3 "Use Local Interfaces" on page 2-3 ...

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[\[CITATION\] Mastering SQL Server 2008](#)

M Lee, G Bieker - 2009 - Wiley-India

[All 4 versions](#)

[Which kinds of OS mechanisms should be provided for database management?](#)

P Christmann, T Härder, K Meyer-Wegener, A ... - ... with Distributed Systems, 1987 - Springer

... as an atomic, consistent, and isolated sequence of actions (operations) with **durable** results is a ... Such an interface allows simple **read** and write operations of fixed- length blocks ... For example, **change** of **storage** technology or communication protocols affect the DBMS code. ...

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[BOOK] Beginning Oracle Database 11g Administration: From Novice to Professional

I Fernandez - 2009 - books.google.com

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[PDF] Client/Server Systems, Middleware and EAI (Enterprise Application Integration) A. Buchmann DVS, Fachbereich Informatik

TU Darmstadt - Citeseer

... Enforces business rules and establishes business processes. Resource manager deals with **storage**, indexing, and retrieval of **data** necessary to support the application logic. ... Client Business processes Persistent storage **Page** 5. 5 ... **Data** distribution or replication ...

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[PDF] Is It Possible To Use Oracle TimesTen While Maintaining Real-Time Performance?

MAJ Qureshi, P Taban, S Vasterås - ahmadjaved.com-a.googlepages. ...

... ALE: Alert Detection (It acquires **data** from both databases TDB and DDB, finds alert on basis of two databases, in case alert is detected) ... EDF is the most suitable for ATC system **Page** 18. ...

[5, pg 83] Conflicts can occur in **transaction** during read/write to TDB. ...

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[HTML] Rethink the sync

EB Nightingale, K Veeraraghavan, PM Chen, ... - Proceedings of the 7th ..., 2006 - unix.org

... This **change** guarantees ordering; specifically, the property that if an operation A causally precedes ... faster than disabling the drive cache since the drive cache improves **read** times and ... ext3, xsyncfs guarantees that the **data** associated with each POST request is **durable** before a ...

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unix.org [HTML]

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SR Madden, DDS Myers - 2008 - dspace.mit.edu

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Affinity-based management of main memory database clusters

M Ji - ACM Transactions on Internet Technology (TOIT), 2002 - portal.acm.org

... as a single operation on that machine, ie, application of the **change log** from the ... be leveraged to guarantee the atomic, consistent, isolated, and **durable** (ACID) properties ... one of the five categories: local (**reading** replicated columns only), **read** (**reading** nonreplicated columns ...

Cited by 11 - Related articles - All 2 versions

Maintaining and checking parity in highly available Scalable Distributed Data Structures

D Cieslicki, S Schaeckeler, T Schwarz - Journal of Systems and Software, 2009 - Elsevier

... All fields Author Search tips (Opens new window) Journal/book title. Volume Issue Page Clear

all ... Current control centers **store** this **data** on a pair of mirrored disks, but could use SDDS ... allows a much higher number of reads and can therefore accommodate **read** access from ...

[PS] Transaction Management in CoOMS

A Geppert, S Scherrer, KR Dittrich, F ... - 1993 - ifi.uzh.ch

... **transaction** forests and among siblings, subtransactions "inherit" the rights to perform **read** or write ... Thus, in essence each par- ent decides whether its subtransactions are **durable**, and in ...

Additionally, this (**data** model) layer contains a scheduler that synchronizes DML-operations ...

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Using Abstract State Machines to Model ARIES-based Transaction Processing

M Kirchberg - Journal of Universal Computer Science, 2009 - jucs.org

... which never **change** during any run of M, and dynamic functions, which may **change** as a ... According to this scheduling rule, only those **read** and write operations are passed on to the ... must only be released after the effects of a **transaction's** operations have been made **durable**. ...

Cited by 1 - [Related articles](#) - [All 6 versions](#)

jukm.org [PDF]

Communication-link-attached persistent memory system

S Fineberg, P Mehra, R Hansen - US Patent App. 10/808,138, 2004 - Google Patents

... In this manner, **read** or write commands are carried on RDMA-enabled SAN 106 to the nPMU's ...

In a write operation initiated by processor node 102, for example, once **data** have been ... 29, 2005 successfully stored in the nPMU, they are **durable** and will survive a power outage or ...

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[PDF] Dat abases

S Oza - 1997 - nlc-bnc.ca

... ceptually in computers. Two operations are possible on the **data**: **read** and mite. The **change** in the system's state is noted by writing contents of the database. An ... It is designed to handle large volume of stored **data** efficiently. -4 DBMS and a database together ...

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[PDF] The Hadoop Distributed File System

K Shvachko, H Kuang, S Radia, R Chansler - storageconference.org

... DataNodes in HDFS do not use **data** protection mechanisms such as RAID to make the **data** **durable**. ... System evolution may lead to a **change** in the format of the NameNode's checkpoint and ... However, many efforts have been put to improve its **read**/write response time in order ...

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[PDF] Coordinating access to computation and data in distributed systems

DL Thain - 2004 - Citeseer

... distinct entities: one service did not know about the other. Accesses to the file server by programs

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succeeded or failed solely on their own terms. A failure to **read** or write **data** would **Page 27**. 17

be exposed to the program and had no direct bearing on access to the CPU. ...

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[\[PDF\] Building a Database in the Cloud](#)

[ethz.ch](#) [PDF]

M Brantner, D Florescu, DA Graf, D Kossmann, T ... - dbis.ethz.ch

... **Read**(key as uuid, uri as string): Reads the payload **data** of a record given the key of the record and the URI of the collection. ... The only way to **change** a key of 14 ... We use the term **transaction** for a sequence of **read**, update, and create requests between two commit or abort calls. ...

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... its predecessor or successor to generate repairs every ten minutes or when these servers **change**. ...

of costs from repetitive article transmission and replication of un-**read** articles in ... [16] Haeberlen,

A., Mislove, A., and Druschel, P. Glacier: Highly **durable**, decentralized **storage** ...

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... its predecessor or successor to generate repairs every ten minutes or when these servers **change**. ...

of costs from repetitive article transmission and replication of un-**read** articles in ... [16] Haeberlen,

A., Mislove, A., and Druschel, P. Glacier: Highly **durable**, decentralized **storage** ...

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DE Porter, OS Hofmann, CJ Rossbach, A ... - Proceedings of the ..., 2009 - portal.acm.org

... the system can always roll back to a pre-**transaction** state) and **durable** (trans- action results ... The

presence of system transactions does not **change** the behav- ior of non-transactional ... 3.2 TxOS

overview TxOS implements system transactions by isolating **data read** and written in a ...

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[Network distributed tracking wire transfer protocol](#)

JK Overton, SW Bailey - US Patent App. 11/354,224, 2006 - Google Patents

... **Page 14**. US 2007/0011267 Al Jan. ... Relationships between identification strings and location

strings can be dynamically and spontaneously manipulated thus allowing the corresponding

data relation- ships also to **change** dynamically, spontaneously, and effi- ciently. ...

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... even in this limited domain they accept the loss of the last few seconds of new file **data**). In partic- ...
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C Urwiler, G DeWitt, M Levy, L Koorhan, C Caron - 2000 - books.google.com

... Inside of a dog, it's too dark to **read**." Whil Hentzen Hentzenwerke Publishing August, 2000 ... Source
Code & .CHM Files." (The text for this link may **change** over time ... SQL Server transactions 196
Implicit transactions 196 SQL Server isolation levels 198 **Durable** transactions 200 ...

[All 2 versions](#)

[\[HTML\] Recent Filesystem Optimisations in FreeBSD](#)

[usenix.org](#) [HTML]

I Dowse, D Malone - usenix.org

... Consequently, some operations which have traditionally been **durable** on system call return are
no longer so. ... indexes have the disadvantage that once you commit to one, you cannot **change**
its format. ... A **transaction** can either be a file create, delete, **read** or append operation. ...

Cited by 21 - [Related articles](#) - [Cached](#) - [All 23 versions](#)

[Secure kernel transactions](#)

J Cargille, S Verma, MJ Zbikowski, WR ... - US Patent 7,591,015, 2009 - Google Patents

... an outcome for a **transaction** has been determined, the result is guaranteed never to **change**
(durability ... Thus alerted, RM prepares 310 by rendering resource **data** in a **durable** state so that ...
then records the outcome in an associated **log**, and the underlying resource **data** is either ...

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C Sponsorship - freya.cs.uiuc.edu

... No understanding of the exact implementation of the task or the **data** structures is needed. ... This
case is rare as the **read**- modify-write operation is fast and has a low penalty (it ... transactions is
that the programmer must be very careful when using them as they **change** the atomicity ...

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[\[BOOK\] MySQL: the complete reference](#)

V Vaswani - 2004 - books.google.com

... you might prefer to see this book as a desktop reference, flipping it open on an as-needed basis
to **read** about specific ... Real-world examples include an interactive command-line SQL client and
an interactive expense tracker that supports **data** entry and simple report ... **Page** 21. ...

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[\[PDF\] Providing Fault Tolerance for Transactional Web Services](#)

[psu.edu](#) [PDF]

I Vasquez, JA Miller, K Verma - Citeseer

... ReadOnly Notifies the coordinator about a participant operation that did not **change** the state of ... tracing pre- and post- images of the **data**, only the operations performed against it are ... on behalf of a **transaction** (including those resulting in a negative vote, **read-only** operations ...

[Related articles](#) - [View as HTML](#) - [All 9 versions](#)

[\[PDF\] Efficient Commit Processing in High-Availability Main-Memory Databases](#)

[ntnu.no](#) [PDF]

H Kolltveit - 2008 - idi.ntnu.no

... This gives a load of almost 3900 **read** transactions per second. ... In addition, to maintain consistency, the system must maintain a backup of the **data** of the crashed process. ... worse, since a backup replica of the client would take over the processing, and this **change** is transparent ...

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[psu.edu](#) [PDF]

CA Small - 1998 - Citeseer

... to applications, as if they were standard files, but the auto- compression implementations of **read** and write ... to communi- cate with the receiving domain, it is necessary to move **data** from the ... informed that a different process is in context, which can entail switching **page** tables and ...

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[\[PDF\] Cluster storage for commodity computation](#)

[psu.edu](#) [PDF]

RG Ross - Proceedings of the 1st USENIX Workshop on - Citeseer

... As usage patterns **change**, the partition boundaries are updated dynamically, with urgent changes made quickly and more ... 159 7.1.3 **Read-only** territory grants ... simulations, and graphics rendering farms are all characterised by repetitive computa- tions over huge **data** sets, and ...

[Cited by 2](#) - [Related articles](#) - [View as HTML](#) - [All 7 versions](#)

[Optimistic replication](#)

[psu.edu](#) [PDF]

Y Saito, M Shapiro - ACM Computing Surveys (CSUR), 2005 - portal.acm.org

... mirroring [Nakagawa 1996; Krasel 2000] let a replica be added with no **change** to ex ... try to increase the system's throughput by, for example, letting transactions **read** values produced by ... Isolated (interme- diate state is not observable by other transactions), and **Durable** (the final ...

[Cited by 340](#) - [Related articles](#) - [All 39 versions](#)

[\[PDF\] Speculative execution within a commodity operating system](#)

[psu.edu](#) [PDF]

EB Nightingale - 2007 - Citeseer

... For example, writing **data** to disk could be internal as long as a commit never occurs (ie, the **durable** changes can be ... is marked as speculative and the **data** associated with the action is buffered within the kernel. ... ments where resource usage may **change** drastically? ...

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eNVy: a non-volatile, main memory **storage** system[postech.ac.kr](#) [PDF]

M Wu, W Zwaenepoel - ... of the sixth international conference on ..., 1994 - portal.acm.org
 ... nology matures, Flash has the potential to become very **durable**. A Flash chip normally operates in an EPROM-like **read** only mode. All other functions are initiated by ... ally involves a series of program and verify steps until the desired **data** is actually changed on the chip. ...

Cited by 232 - [Related articles](#) - [BL Direct](#) - [All 7 versions](#)[HTML] Berkeley db[usenix.org](#) [HTML]

MA Olson, K Bostic, M Seltzer - ... of the FREENIX Track: 1999 USENIX ..., 1999 - usenix.org
 ... **Read**-only applications can use Berkeley DB's memory-mapped file service to improve performance on most architectures. Configurable **page** size. ... They must be **durable**. ... When it finishes, the database will contain every **change** made by every **transaction** that ever committed. ...

Cited by 187 - [Related articles](#) - [Cached](#) - [All 16 versions](#)Integrating temporal, real-time, an active databases[psu.edu](#) [PDF]

K Ramamritham, R Sivasankaran, JA Stankovic, ... - ACM Sigmod ..., 1996 - portal.acm.org
 ... purposes, some of the sensor readings and actuator control settings may be archived, that is, made **durable**. ... to NV-RAM if the validity is long enough for a NV-RAM write and **read**. ... Temperatures typical **change** slowly, but the values are used for many other critical calculations. ...

Cited by 51 - [Related articles](#) - [BL Direct](#) - [All 5 versions](#)Natix: A technology overview[psu.edu](#) [PDF]

T Fiebig, S Helmer, CC Kanne, G Moerkotte, J ... - Web, Web-Services, ..., 2002 - Springer
 ... Each record is identified by a slot number which does not **change** even if the ... pro- cessing depends on primitives based on the proven foundation of atomic, **durable** and serializable ... The log manager provides the routines to write and **read log** records, synchronizing access of ...

Cited by 19 - [Related articles](#) - [BL Direct](#) - [All 12 versions](#)[PDF] The recovery manager of a **data** management system[psu.edu](#) [PDF]

JN Gray, P McJones, M Blasgen, RA Lorie, TG ... - IBM Research Report ..., 1979 - Citeseer
 ... is complicated to program and has the problem that the flight status may **change** during the ... application programs using the RDS can construct groups of RSS actions which are atomic and

durable. ... To see why this is necessary, suppose a **read** lock on a record were released by ...

[Cited by 33](#) - [Related articles](#) - [View as HTML](#) - [All 5 versions](#)

Method and apparatus for insuring database **data** integrity without **data** recovery logging

RW Lyle, JZ Teng, JA Yothers - US Patent 6,651,073, 2003 - Google Patents

... In order to make such a database system **persistent** or "**durable**", the **data** pages must be ... Unlike non-distributed databases where a single **change** is, or is not, made locally, all ... single thread process on the entire table and, consequently, it prevents concurrent **read/write** access ...

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Anatomy of a native XML base management system

[psu.edu](#) [PDF]

T Fiebig, S Helmer, CC Kanne, G Moerkotte, J ... - The VLDB Journal, 2002 - Springer

... Special calls exist to avoid I/O for **reading** or writing newly allocated or deallocated pages ... a regular slotted **page** implementation, which maintains a collection of variable- length records on a **data page**. Each record is identified by a slot number which does not **change** even if the ...

[Cited by 177](#) - [Related articles](#) - [All 23 versions](#)

[BOOK] Transaction processing: concepts and techniques

[microsoft.com](#) [PPT]

J Gray, A Reuter - 1993 - books.google.com

... LAN RPC random **read** memory record 1,000 - " local RFC sequential write record mcmofl process dispatch sequential **read** record 100 ... of the TP Monitor 312 6.3.1 The Central **Data** Structures of the TPOS 313 **Data** Structures Owned ... ii Contents 6.4.2 **Durable** Request Queues ...

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[HTML] Journaling versus soft updates: Asynchronous meta-**data** protection in file systems

[usenix.org](#) [HTML]

MI Seltzer, GR Ganger, MK McKusick, KA ... - USENIX Annual ..., 2000 - usenix.org

... that focus on file systems and their performance, we do not see any **change** in this ... of the normal main memory is treated as a protected region, maintained with **read-only** protection ... it does not guarantee (as FFS does) that all meta-**data** operations are **durable** upon completion of ...

[Cited by 165](#) - [Related articles](#) - [Cached](#) - [All 24 versions](#)

[CITATION] Implementing atomicity in two systems: techniques, tradeoffs, and experience

LF Cabrera, JA McPherson, PM Schwarz, JC Wyllie - IEEE Transactions on Software ..., 1993

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Method and apparatus for efficiently recovering from a failure in a database that includes unlogged objects

RW Lyle, JZ Teng, JA Yothers - US Patent 6,567,928, 2003 - Google Patents

... In order to make such a database system **persistent** or "**durable**", the **data** pages must ... Unlike non-distributed databases where a single **change** is, or is not, made locally, all ... US 6,567,928 BI table and, consequently, it prevents concurrent **read/write** access by other applications ...

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Checkpoint methods and systems utilizing non-disk **persistent** memory

GS Smith, SA Fineberg, P Mehra, R ... - US Patent App. 10/ ..., 2004 - Google Patents

... In this manner **read** or write commands are carried on RDMA-enabled SAN 306 to the CPMU's network interface (NI) 308. ... In a write operation initiated by processor node 302, for example, once **data** have been successfully stored in the CPMU, they are **durable** and will ...

[All 2 versions](#)

The design and implementation of a multilevel secure **log** manager

VR Pesati, TE Keefe, S Pal - sp, 1997 - computer.org

... However, it is possible with a minor **change** in the way paths are selected. ... It returns the **durable** LLSN which is on WADS for that level. The **log-open-cursor** interface provides a way of opening a cursor for **reading log** records. ...

[Cited by 8](#) - [Related articles](#) - [BL Direct](#) - [All 6 versions](#)

[PDF] File system extensibility and reliability using an in-kernel database

[psu.edu](#) [PDF]

A Kashyap - Master's Thesis, State University of New York, Stony ..., 2004 - Citeseer

... A simple **change** such as adding an extra inode attribute for inode creation time would be difficult ...

The database files can exist on any file system that provides standard **read-write** capabilities. ...

Using the O SYNC option with open(2) provides **durable** writes, while also having the ...

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[PDF] A Snapshot Utility for a Distributed Object-Oriented Database System

[mit.edu](#) [PDF]

CH Moh - 2002 - pmg.lcs.mit.edu

... The Anti-MOB saves the state of **data** objects before they are modified so that the OR can later undo the modifications from a **page** on the disk to ... The MOB improves performance of the system by allowing installation **read** to be performed in a background flusher thread. ...

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[PDF] Sorting and Indexing with Partitioned B-trees

[psu.edu](#) [PDF]

G Graefe - Proc. of the 1st Int'l Conference on Innovative Data ..., 2003 - Citeseer

... traditional implementation of partitioning, each creation or removal of a partition is a **change** of the ... contain 1,000 records), and merge those at a cost of 9,000 records **read**, merged, and ... The initial **data** transfer (prior to committing the initial index) may omit **data log**-ging, similar ...

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The impacts of write-through procedures and checkpointing on real-time concurrency control

[psu.edu](#) [PDF]

TW Kuo, YH Hou, KY Lam - The Computer Journal, 2003 - Br Computer Soc

... Logical logging can **change** a long physical **log** into a record of only a few words [12]. ... Before a **transaction** reads (or writes) a **data** object, it must first **read-lock** (or write-lock) the ... the former **data** object is not later than the corresponding unlocking operation of the latter **data** object ...

[Cited by 3](#) - [Related articles](#) - [BL Direct](#) - [All 11 versions](#)

Method and apparatus for incremental undo

B Nainani, GC Ngai, W Huang, JD Klein, RJ ... - US Patent ..., 2001 - Google Patents

... Uncommitted transac- tions should not be **durable**. ... chip or cartridge, a carrier wave as described hereinafter, or any other medium from which a computer can **read**. ... then undo information from the rollback entry is retrieved from the undo record and a **change** is generated for the ...

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[PDF] Write optimized object-oriented database systems

[psu.edu](#) [PDF]

K Nørnvåg, K Bratbergsengen - Conf. of the Chilean Computer Science ..., 1997 - Citeseer

... When a **transaction** is committed, the **data** should really be **durable**. ... Traditional clus- tering works well as long as the access pattern is static, but if this happens to **change**, or access pattern is ... This block holds static volume information, and is only **read** when the system is started. ...

[Cited by 4](#) - [Related articles](#) - [View as HTML](#) - [All 7 versions](#)

[CITATION] Write optimized object-oriented database systems

K Norvag, K Bratbergsengen - Computer Science Society, 1997. Proceedings., XVII ..., 1997

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[PDF] Library Express-Interlibrary Loan Request

[wisc.edu](#) [PDF]

R ARPACI-DUSSEAU - ACM Computing Surveys, 1981 - pages.cs.wisc.edu

... To avoid service interruption, notify your local Post Office before **change** of residence: for a fee ... System R recovery manager sup- ports these commands and guarantees an atomic, **durable** execution. ... crash or disk dropped on the floor) or by software failure (bad **data** written on a ...

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Recovery guarantees for internet applications

[psu.edu](#) [PDF]

R Barga, D Lomet, G Shegalov, G ... - ACM Transactions on ..., 2004 - portal.acm.org

... Since the sender must make its state **durable**, there is low cost of also taking responsibility for ensuring that the message is ... However sometimes, physical logging is inevitable, for example, when **reading** the real-time clock. ... Ids for processes, threads, or users may also **change**. ...

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The Rio file cache: Surviving operating system crashes

[psu.edu](#) [PDF]

PM Chen, WT Ng, S Chandra, C Aycock, G ... - Proceedings of the ..., 1996 - portal.acm.org

... When the system is rebooted, it must **read** the file cache contents that were present in physical ... faults that leave the system running will propagate **data** to disk and hence not **change** the relative ... Rio is 4-22 times as fast as systems that guarantee **data** permanence after each file ...

[Cited by 168](#) - [Related articles](#) - [BL Direct](#) - [All 57 versions](#)

Straightforward Java persistence through checkpointing

[psu.edu](#) [PDF]

J Howell - ... of the Eighth International Workshop on **Persistent** ..., 1999 - books.google.com

... If we could avoid writing out the program text and the **read-only** text of shared libraries, the initial ...
See Figure 4 (a). An advantage of this approach is a **durable** im- plementation that does not ... is
that the implementation of such a system must be modified to track each **change** to the ...

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[\[PDF\] Distributed computing with BEA WebLogic server](#)

[psu.edu](#) [PDF]

D Jacobs - Proceedings of the Conference on Innovative **Data** ..., 2003 - Citeseer

... The persistence tier provides **durable storage** in the form of databases and file systems. ... in memory
after it is loaded, dur- ing which it can be freely used to satisfy **read** requests in ... Even if the target
server immediately notices the ownership **change**, there is little it can do about the ...

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X Caron - 2000 - Citeseer

... 17 Mirrored Write Operation.....17 Mirrored **Read** Operation.....18 ... that has to
be made **durable** to a ... be possible to retrieve the **data** in a ...

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[P* TIME: highly scalable OLTP DBMS for managing update-intensive stream workload](#)

[psu.edu](#) [PDF]

SK Cha, C Song - ... conference on Very large **data** bases-Volume 30, 2004 - portal.acm.org

... the time to recover a database in memory and the higher **durable-commit** update ... In an SMP
environment, these operations incur excessive coherence L2 cache misses in **reading** or writing ...
the inherent parallelism of differential logging as two serial transactions **change** a **data** ...

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WL Server - 2002 - Citeseer

... **Page 11.** BEA WebLogic Server Performance and Tuning xi **Change** In JMS Server or Destination
Status 15-3 Avoiding **Durable** Subscriptions "Tune the Chunk Size" on **page 2-3** "Use
Optimistic or **Read-only** Concurrency" on **page 2-3** "Use Local Interfaces" on **page 2-3** ...

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[Which kinds of OS mechanisms should be provided for database management?](#)

P Christmann, T Härder, K Meyer-Wegener, A ... - ... with Distributed Systems, 1987 - Springer

... as an atomic, consistent, and isolated sequence of actions (operations) with **durable** results is

a ... Such an interface allows simple **read** and write operations of fixed- length blocks ... For example, **change of storage** technology or communication protocols affect the DBMS code. ...

[Cited by 3](#) - [Related articles](#) - [All 5 versions](#)

Affinity-based management of main memory database clusters

M Ji - ACM Transactions on Internet Technology (TOIT), 2002 - portal.acm.org

... as a single operation on that machine, ie, application of the **change log** from the ... be leveraged to guar- antee the atomic, consistent, isolated, and **durable** (ACID) properties ... one of the five categories: local (**reading** replicated columns only), **read** (**reading** nonreplicated columns ...

[Cited by 11](#) - [Related articles](#) - [All 2 versions](#)

[PS] Transaction Management in CoOMS

[uzh.ch](#) [PS]

A Geppert, S Scherrer, KR Dittrich, F ... - 1993 - ifi.uzh.ch

... **transaction** forests and among siblings, subtransactions “inherit” the rights to perform **read** or write ... Thus, in essence each par- ent decides whether its subtransactions are **durable**, and in ... Additionally, this (**data** model) layer contains a scheduler that synchronizes DML-operations ...

[Cited by 3](#) - [Related articles](#) - [View as HTML](#) - [All 3 versions](#)

Communication-link-attached **persistent** memory system

S Fineberg, P Mehra, R Hansen - US Patent App. 10/808,138, 2004 - Google Patents

... In this manner, **read** or write commands are carried on RDMA-enabled SAN 106 to the nPMU's ... In a write operation initiated by processor node 102, for example, once **data** have been ... 29, 2005 successfully stored in the nPMU, they are **durable** and will survive a power outage or ...

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... distinct entities: one service did not know about the other. Accesses to the file server by programs succeeded or failed solely on their own terms. A failure to **read** or write **data** would Page 27. 17 be exposed to the program and had no direct bearing on access to the CPU. ...

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... even in this limited domain they accept the loss of the last few seconds of new file **data**). In partic- ...
model in describing the problem of failures, and the challenges of recovering from them. **Page**
22. 10 ... cesses as finite state machines that **change** state in response to inputs. ...

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... to applications, as if they were standard files, but the auto- compression implementations of **read**
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informed that a different process is in context, which can entail switching **page** tables and ...

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A Geppert, F Datenbanktechnologie - 1992 - Citeseer

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individual ... Com- mitted subtransactions are **durable**, while in case of a crash each active
subtransaction is ... to tell the system that the re- spective colleague is allowed to **read** (and modify ...

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... originate from the airplane industry where **data** is monitored and stored in a **durable** box, the ... A traceable component has to expose an interface to **change** properties of the tracing mechanism. ... In a layered architecture faults that originates from the **data** layer can be difficult to find ...

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Method and system for transacted file operations over a network

PJ Madhavarapu, S Pardikar, BS Raman, S ... - US Patent App. 10/ ..., 2003 - Google Patents

... Typical file operations include creating a new file, **reading** a file, writing a file, copying a file, renaming a file, etc. ... **Page** 14. ... **Buffer** for the file name, which is aligned in the **data buffer** to a DWORD (4 bytes) boundary The name of the file (not NUL terminated) [0032] [0033] TABLES ...

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... In a hospital, when the **reading** of a sensor attached to a patient exceeds a given threshold and a new drug has been ... well-defined structure, for example a set of ordered strings, and generic events do not have an expressive structure (**data** type any ... Event order may not **change**. ...

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